

forests that exist there today." (I have twice visited the area with Erickson, once accompanied by Balée; both times I was powerfully struck by the evidence of landscape domestication.)

This entire system, and others like it, fell apart in the 16th century. Between 1500 and 1700, European disease, slavery, and war killed 90 percent or more of the native population. With no hands on the tiller, so to speak, landscapes throughout the hemisphere went feral, which is not the same as going "wild." The tropical forest we seek to protect today was in significant part the accidental by-product of this horrific loss.

Driven by population loss and fear of enslavement, many groups gave up agriculture in favor of foraging; Loretta A. Cormier tracks one such group, the Guajá in eastern Amazonia, who survived by "patch-to-patch movement from old fallow field to old fallow field," living off the landscape domesticated by their predecessors. Others con-

tinued to farm, Denevan notes, but in a new way: slash-and-burn. Although ecologists have both celebrated slash-and-burn as adaptive and vilified it as destructive, they have commonly regarded it as an age-old practice. Stone axes were such inefficient instruments of land clearing, Denevan writes, that "long-fallow shifting cultivation was probably difficult, even with the girdling and burning of tree trunks." Once patches of forest were opened up, farmers had an incentive to keep using them, with short fallow times to reduce weeds. By contrast, metal axes are up to 60 times more efficient (Carneiro 1979)—ideal for populations that want to move quickly in and out.

Many ecologists have come to accept these ideas, at least in part, but they remain anathema to most conservation groups and are a source of puzzlement to land managers, for whom the vision of pre-Columbian wilderness is a useful benchmark. For these people, *Time*

and *Complexity* will provide little consolation. The task of understanding and conserving the lowland Neotropics, it suggests, falls into the purview of anthropology, archaeology, geography, and the other human sciences.

CHARLES C. MANN

Charles C. Mann (e-mail: ccmann@gmail.com) is the author, most recently, of *1491: New Revelations of the Americas Before Columbus* (Knopf, 2005).

## References cited

- Botkin DB. 1990. *Discordant Harmonies: A New Ecology for the Twenty-first Century*. New York: Oxford University Press.
- Carneiro RC. 1979. Tree felling with the stone axe: An experiment carried out among the Yanomamö Indians of southern Venezuela. Pages 21–58 in Kramer C, ed. *Ethnoarchaeology: Implications for Archaeology*. New York: Columbia University Press.
- Roosevelt AC, et al. 1996. Paleoindian cave dwellers in the Amazon: The peopling of the Americas. *Science* 272: 373–384.

doi:10.1641/B570912

Include this information when citing this material.

## HUMAN AGENCY GONE AWRY

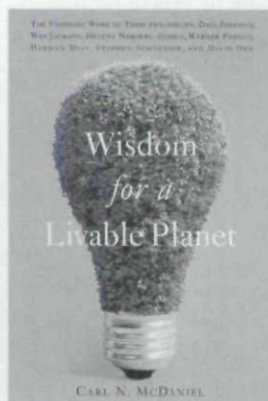
**People and Nature: An Introduction to Human Ecological Relations.** Emilio F. Moran. Blackwell, Malden, MA, 2006. 232 pp., illus. \$30.95 (ISBN 9781405105729 paper).

We certainly live in ecologically interesting times. In 2005, the Millennium Ecosystem Assessment (MEA)—the most comprehensive sustainability assessment ever undertaken—proclaimed: "At the heart of this assessment is a stark warning. Human activity is putting such a strain on the natural functions of the Earth that the ability of the planet's ecosystems to sustain future generations can no longer be taken for granted" (MEA 2005). The language is plain enough. Humanity has a collective problem that demands determined action by the entire world community. But wait a minute—didn't the Union of

## Wisdom for a Livable Planet

The Visionary Work of Terri Swearingen, Dave Foreman, Wes Jackson, Helena Norberg-Hodge, Werner Fornos, Herman Daly, Stephen Schneider, and David Orr

BY CARL N. MCDANIEL



"This book contains a number of home truths, calmly and moderately enunciated, that point the way toward a world more sturdy and robust than the troubled one we now inhabit. It is a kind of primer for twenty-first-century citizenship, and well worth the reading."—BILL MCKIBBEN, author of *Wandering Home*

AVAILABLE WHEREVER BOOKS ARE SOLD



Trinity University Press

San Antonio, Texas www.trinity.edu/tupress



Concerned Scientists (UCS) “warn all humanity” back in 1992 that “a great change in our stewardship of the earth and the life on it is required, if vast human misery is to be avoided and our global home on this planet is not to be irretrievably mutilated” (UCS 1992)? If the MEA’s yellow flag is justified, it seems that the UCS’s earlier, even more strident warning has had minimal effect. Just what is going on here? Why does the purportedly most intelligent and self-aware species on Earth seem bent on destroying its habitat just like any other plague species?

Anyone looking for insight into this question might naturally be drawn to Emilio F. Moran’s *People and Nature: An Introduction to Human Ecological Relations*. The book’s title is enticing enough, and Moran has impeccable credentials. A well-known ecological anthropologist, he is Rudy Professor of Anthropology and the director of the Anthropological Center for Training and Research on Global Environmental Change, as well as a professor of environmental sciences, at the University of Indiana. The goal of *People and Nature* is ambitious and its scope wide ranging. Moran promises “to

introduce the reader to the evidence, both historical and contemporary, for how the reciprocal interactions between people and nature have developed, the urgency for action now to prevent truly disastrous consequences, and to make suggestions as to how we might go about doing so” (p. xi); for the most part, he delivers.

Moran begins by establishing an essential element of context—in the past 50 years there has been a sea change in nearly every aspect of humanity’s relationship with nature. Under the inexorable pressure of exponential growth, the most recent doubling of the global material economy has taken us from a half-empty to an ecologically overfull world. Moran also emphasizes human agency—people’s active, cumulative role in accelerating the degradation of the ecosphere as well as our potential to arrest the process. Significantly, he acknowledges that the “we” in this context does not apply evenly to all members of the human family. “Clearly, the burden on the planet today is coming from urban-industrial societies and this ‘we’ has to step forward now and take responsibility for solving

the problem it has created. We must lead by example” (p. 2).

Going further against the mainstream grain, Moran explicitly fingers globalization for its role in accelerating the degradation of critical ecosystems. Hunter-gatherers and even preindustrial farmers lived their lives spatially within the ecosystems that supported them and thus suffered the direct and immediate consequences of overhunting or the misuse of local landscapes. Regrettably, globalization and urbanization, two of the most powerfully prevalent of contemporary trends, effectively short-circuit this critical feedback mechanism by distancing people both spatially and psychologically from the ecosystems that support them. The materially wealthy are not directly affected by the negative consequences of their consumer lifestyles on distant supportive ecosystems.

Overall, the major themes of *People and Nature* provide a menu rich enough to satisfy any beginning student of ecological anthropology. Moran explores the history of human–environment interactions in all its diversity, both bleak and encouraging; describes the web of life and humanity’s role in it; discusses adaptation

NEW from Conservation In Practice

## ConservationNews.org

Log on to ConservationNews.org for a daily diet of conservation news, cutting edge ideas, and razor sharp commentary that you’ll find nowhere else.

*Conservation In Practice* does the legwork in print—and now online—so you stay on top of the field.

**Don’t get left behind**





and how various peoples use information to adjust to changing ecological realities; explains why sustainability represents an unprecedented challenge to humanity's collective future; and argues that in developing an appropriate global response, the primacy of consumption and material accumulation in the wealthy world must give way to values rooted in reciprocity, human dignity, and mutual trust.

Of course, any ambitious book is bound to have weaknesses, and this one has two that especially grate. First, the text too frequently assumes the quality of an unedited first draft. In describing systems' resistance to dramatic change, for example, Moran writes, "As with trying to shift the course of an ocean liner or a large tanker, it takes quite a bit of time to change the forward momentum of a ship" (p. 155). The simile acquires meaning in context only if the reader substitutes "ecological change" for "a ship." In other places, verbless or isolated phrases masquerade as sentences, and there are even occasional factual errors. For example, it most assuredly does *not* "now take only 32 years for the human population to double" (p. 114). Moran's assertion implies a global population growth rate of 2.2 percent per year, a rate that has never quite been achieved, and which is double today's actual (and declining) population growth rate.

A more important weakness is the author's prescription for what ails us. In his final chapter, Moran all but eschews "global solutions" and underplays collective action in favor of individual human agency and "a set of considerations for reflection so that each of us, following our own ethics and conscience, can begin to construct a set of human ecological relations that is consistent with the sustainability of people in nature" (p. 151). This prescription seems not to recognize, however, that the dominant material ethic in the world today is rampant consumerism; that the ecologically literate behave much the same as the uninformed; that humanity has limited capacity for extended altruism; and that most governments, international institutions, and ordinary people show overweening confidence in technology to substitute for nature. And where does

this leave the many potential lessons of cultural and ecological anthropology that one might reasonably have expected from this book? Not all preindustrial peoples destroyed their supportive ecosystems, nor has the total human enterprise always been at odds with nature. Surely there is a missing story here.

In the end, then, Moran does not draw enough from the richness of his own discipline. Indeed, he barely touches upon such contemporary solutions as ecologically truthful pricing and improved foreign policy. He mainly exhorts wealthy consumers to "choose to consume a lot less and become models of a new biocentric model of production and consumption" (p. 158). We must "resist the forces of global consumerism" (p. 166) and "[turn] off our televisions" so that we can "[reconnect] with members of our families and communities and [begin] to buy only what we really need" (p. 168). As any iPod-addicted teenager heading to the mall in the family SUV is certain to respond, "Oh, yeah, like, that's totally gonna happen!" Without a more broadly based policy platform for global sustainability, including strong collective interventions to force individual behavioral change, contemporary evidence suggests modern humans are likely to continue dismantling their only planetary habitat.

WILLIAM E. REES

William E. Rees (e-mail: [wrees@interchange.ubc.ca](mailto:wrees@interchange.ubc.ca)) is a professor in the School of Community and Regional Planning at the University of British Columbia in Vancouver, Canada.

## References cited

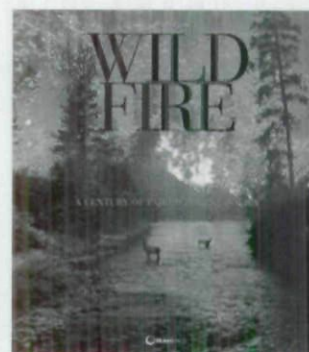
- [MEA] Millennium Ecosystem Assessment. 2005. Living Beyond Our Means: Natural Assets and Human Well-being. Statement from the Board. (6 September 2007; [www.millenniumassessment.org/documents/document.429.aspx.pdf](http://www.millenniumassessment.org/documents/document.429.aspx.pdf))
- [UCS] Union of Concerned Scientists. 1992. World Scientists' Warning to Humanity. (2 August 2007; [www.ucsusa.org/ucs/about/1992-world-scientists-warning-to-humanity.html](http://www.ucsusa.org/ucs/about/1992-world-scientists-warning-to-humanity.html))

doi:10.1641/B570913

Include this information when citing this material.

## A MISSED OPPORTUNITY TO INFLUENCE FIRE POLICY

**Wildfire: A Century of Failed Forest Policy.** George Wuerthner. Island Press, Washington, DC, 2006. 350 pp., illus. \$75.00 (ISBN 978159726069X cloth).



The ecology and politics of fire are big topics, and *Wildfire: A Century of Failed Forest Policy* is a big book—its 350 softbound pages measure 13-1/4 by 11-3/4 inches, and it weighs more than five pounds. If you're strong enough to lug it to a table that can support it, it's worth taking a look at. Don't expect it to fit on a standard bookshelf, however, or in your pocket or backpack. This is a coffee-table book, but one with substantial content, not merely striking photographs of ecosystems aflame or flowering postfire meadows.

The book has a clear agenda, which occasionally gets in the way of its coherency. Sponsored by the Foundation for Deep Ecology, and edited and written by George Wuerthner, *Wildfire* has an evangelical tone that stems from the voices of former smoke jumpers and firefighters who have learned to appreciate the critical role of fire in forest ecosystems. Their message is a bit too strong in some places, but the book has some excellent chapters and covers many aspects of this broad topic.

The book starts off on an uneven and politicized track with a series of "myths" about fire, each followed by a brief explanation of the "truth." Among the myths are these: "Big fires are the result of too much fuel," "logging mimics fire," "big fires can be stopped," "fire 'sterilizes' the

Copyright of Bioscience is the property of American Institute of Biological Sciences and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.